1.What are the two values of the Boolean data type? How do you write them?

Solution:

The python type of storing True and False values are called Bool or Boolean data type.

They are represented in the form of literals as True and False. Here, the capitalization is very important since Python is case sensitive.

In Python, True can be written as 1 and False can be written as 0.

2. What are the three different types of Boolean operators?

Solution:

The Types of Boolean operators are:

And : True if Both the operands are True

Or: True if Either of the operands are True

Not: True if the operand is False.

3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate ).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| All Possible Combinations of Boolean Operators: | | | | [True=1,False=0] | |
|  |  |  |  |  |  |
| A | Operator | B | Result |  |  |
| 1 | and | 1 | 1 |  |  |
| 1 | and | 0 | 0 |  |  |
| 0 | and | 1 | 0 |  |  |
| 0 | and | 0 | 0 |  |  |
| 1 | or | 1 | 1 |  |  |
| 1 | or | 0 | 1 |  |  |
| 0 | or | 1 | 1 |  |  |
| 0 | or | 0 | 0 |  |  |
| 1! | FALSE | 0! | TRUE |  |  |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

***Solution:***

***5>4=True***

***not (5 > 4) is False***

***Output: False***.

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

***Solution: (5 > 4) or (3 == 5) =>True***

***not ((5 > 4) or (3 == 5)) =>False***

(True and True) and (True == False) ***=>True and False gives False***

(not False) or (not True) ***=> True or False gives True***

5. What are the six comparison operators?

The Six Comparison operators are:

== Checks if the values of two operands are equal or not, if yes then condition becomes True.

!= Checks if the values of two operands are equal or not, if values are not equal then returns True

> Checks if the left operand value is greater than the right operand value or not,

If yes then returns True.

< Checks if the left operand value is less than the right value operand or not,

If yes then returns True.

>= Checks if the left operand value is greater than or equal to the right operand value or not,

If yes then returns True.

<= Checks if the left operand value is less than or equal to the right value operand or not,

If yes then returns True.

6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

Solution: The Difference between Equal to and Assignment operator is:

Equal to (==): This operator compares /checks if the left operand value is equal to the right operand value and returns True if they are equal.

Example: C=a+b

A=10

B=20

C=A+B

Output: 30

Assignment operator (=): This operator Assigns values on right side operand to left side operand/Variable.

Example: A==B

A=10

B=20

A==B

Output: False

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

***Solution:***

spam = 0

***First Block:***

if spam == 10:

print('eggs')

***Second Block:***

if spam > 5:

print('bacon')

***Third part which is Else part:***

else:

print('ham')

print('spam')

print('spam')

8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.

spam=0

if spam==1:

print("Hello")

if spam==2:

print("Howdy")

else:

print("Greetings!")

**Output:** Greetings!

9.If your programme is stuck in an endless loop, what keys you’ll press?

***To Stop an infinite loop we can press ctrl+c where c stands for cancel***

***Can also use break or exit statements in the loop.***

10. How can you tell the difference between break and continue?

Solution: The difference between Break and Continue is :

Break when used in a loop, Stops the execution once the condition reaches break statement in the loop.That is ., Break Statement will stop the entire process, also terminates the successive iterations.

Continue: Once it reaches continue statement, it continues the loop without stopping but stop current iteration.

Continue Statement will stop the current iteration and resumes the successive iteration process in the loop until condition is met.

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

**Solution: In for loop of given range function, there is no difference as each function takes values from 0 to 10 with 1 step increment on each iteration.**

12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.

# print 1 to 10 numbers using for loop: # print 1 to 10 numbers using while loop:

for i in range(10): i=0

i=i+1 while i<10:

print(i) i=i+1

print(i)

Output:

1

2

3

4

5

6

7

8

9

10

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

Solution: After importing a module called spam, we can call the function bacon() by using module name followed by dot operator and function name as

spam.bacon()